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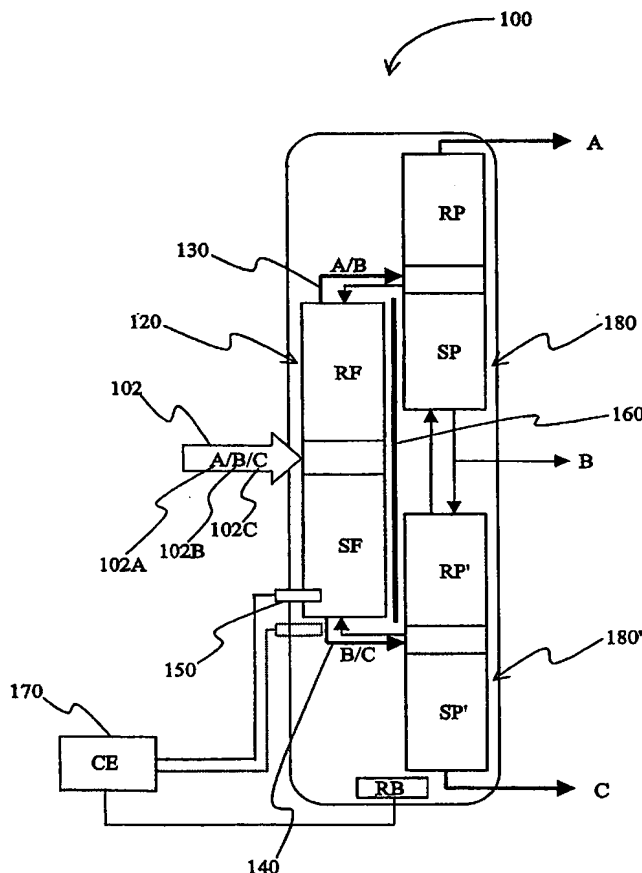
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[Continued on next page]

(54) Title: **IMPROVED DISTILLATION SYSTEMS**



(57) Abstract: A differential vapor pressure (DVP) cell (150) is disposed in a divided wall column (100) that receives a feed comprising a first (102A), second (102B), and third (102C) component. A separation section (120) on the feed side of the divided wall column separates the feed in a vapor comprising the first and second component, and a liquid comprising the second and third component. The DVP cell is disposed in the divided wall column at a level below the point where the feed enters the column, and the DVP cell measures the concentration of the first component.



TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, — *with amended claims*  
GW, ML, MR, NE, SN, TD, TG).

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*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US02/38552

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : B01D 3/14, 3/42; C10G 7/00, 7/12.

US CL : 196/11, 132,141; 202/158, 160; 203/2, 3, 99, DIG.19, 100; 208/347, 351, 363,

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 196/11, 132,141; 202/158, 160; 203/2, 3, 99, DIG.19, 100; 208/347, 351, 363,

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched  
NONE

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
WEST, EAST.

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 4,502,921 A (SHINSKEY) 05 March 1985, columns 5-12.	1,4-11,14-19
Y	US 6,387, 222 B1 (TRAGUT et al) 14 May 2002, see entire document.	1, 4-11, 14-19.
A	US 4,566,807 A (KOOLEN) 28 January 1986, see entire document.	1-20
A	US 3,779,871 A (BROWN) 18 December 1973, see entire document.	1-20
A	US 6,291,734 B1 (STORK) 18 September 2001, see entire document.	1-20

☐ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

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"&" document member of the same patent family

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